

OIL AND WATERFOWL
A policy statement

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Canadian Wildlife Service
Department of the Environment
Ottawa, Ont.

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There are several places in the world where natural outcrops of oily or tarry substances have killed birds and other wildlife for a long time. In the last hundred years, that kind of loss has been increased by additional release of oil into the environment through man's actions. The most acute cases of bird loss by oil have been associated with shipwrecks, particularly those involving oil tankers. Those losses of birds are spectacular, may involve large numbers of birds and may attract a great deal of attention. There is evidence, however that long-term release of oil over a wide area of the world's oceans (Butler, 1975) by accident, runoff and from normal industrial and transport process may be more important in continuing losses of birds. Wildlife losses on land are related to accidents to road, rail and pipeline transport of oil. If those releases occur in areas used by migratory birds, local losses can be spectacular. The long-term effect is rarely important in terms of species survival but may seriously reduce local bird populations.

In continuing release of oil in the world's oceans two things happen. (1) Some birds come in contact with recently released oil and have their plumage soiled. That makes it difficult to maintain normal body temperature and usually results in the loss of the bird; (2) oil enters the environment, enters a food chain and so enters the bird's body in that way. Studies underway at the Vancouver Laboratory of the Canadian Wildlife Service are determining the possible

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detrimental effects of ingestion of weathered oil in small amounts over long periods. Oil is a very complex substance. The analysis of oil and oily materials in nature, in food of birds, and in the digestive tracts of birds is very difficult. Oils differ widely in chemical composition and physical properties. That complicates the analysis and the interpretation of the results of the research.

Many agencies, including those at Newcastle-Upon-Tyne, England, Clark (1968), Pleasant Hill, California, Naviaux and Pittman (1973) have developed methods of removing oil from the plumage of oiled birds. Those groups described methods to remove oil from birds and to restore them to a condition in which they have a chance of survival in the wild.

Recent developments by David Smith and co-workers in California, Smith (1972), Smith (1973) has shown that with his cleaning method well-trained people can remove oil from oiled birds at a fairly high cost per bird for material, manpower, training and facilities.

The Vermers (1974) have produced useful summaries of references on oil in the environment and the oiling and the de-oiling of birds. P.A.C.E. (1974) has reviewed current knowledge on reducing bird mortality associated with oil spills. Recent information and demonstrations have indicated that de-oiling oiled wild birds is difficult, costly and successful only for a small percentage of oiled birds. A better approach to the problems is to reduce the chance of oiling, and the need for rehabilitation.

The Wildlife Service of the Department of the Environment, is responsible for Migratory Birds. To clarify the Department's approach to the problem, Wildlife Service representatives are authorized to state that the Canadian Wildlife Service:

- (1) will cooperate in activities aimed at reducing the likelihood of release of oil into the environment;
- (2) will cooperate with agencies that work to remove oil from the environment and to render less likely the oiling of birds;
- (3) is and will keep aware of methods of cleaning birds being developed and tested by other agencies and will furnish information on request;
- (4) will cooperate with agencies that wish to attempt to clean oiled birds in order to restore them to the wild state, and will issue permits where appropriate to enable competent persons to hold wild birds temporarily in captivity for that purpose.
- (5) will restrict its research on methods of cleaning oiled birds and its cleaning of oiled birds to members of endangered species;
- (6) to avoid suffering will kill, as humanely possible, birds too badly oiled to survive;
- (7) is responsible for the enforcement of the Migratory Birds Regulations as they apply to damage to migratory birds by oil and other contaminants in the environment;
- (8) is conducting research on the effects of ingested, weathered oil on bird physiology.

The Department of the Environment has established the policy that it is the responsibility of an agency which releases unwanted material into the environment, to do whatever is necessary to restore the environment to original conditions. Accordingly, it is the responsibility of the oil industry to do everything within its power to ensure that petroleum products are not released to the environment. It must also do everything possible to remove unwanted oil from the environment as quickly as possible. Private and government agencies may wish to work with oil companies towards those ends. The responsibility for oil in the environment and on birds is clearly and solely the responsibility of the oil companies.

To help oil (and transportation) companies to avoid causing hazards to birds in moving oil from point to point, the Wildlife Service has prepared maps showing the relative importance of different water areas to the birds that depend upon them for food, shelter and other needs at different times of the year. Those maps show the locations of bird concentrations at different seasons and thus indicate where an oil spill into the environment would cause severe damage to birds. That information is now available for the Atlantic Coast*#, the Gulf of St-Lawrence*# and the Great Lakes#. The map series will be expanded to cover the Pacific Coast and those parts of the Arctic Coast most likely to become involved in oil traffic. All water areas used by birds where there is a possibility of an oil spill will be mapped.

* Atlas of Eastern Canadian Seabirds. Canadian Wildlife Service. 1975. 220p. Available from Information Canada, Cat. No. CW66-44/1975.

List of maps (Available from CWS, Ontario Region, Ottawa). Waterfowl Sensitivity area maps.

Oil companies have tried to avoid criticism by saying that transport vehicles including ships carrying their products are sometimes poorly handled, poorly equipped or have other difficulties. As users the oil companies have at their discretion the kinds of ships and other equipment involved in transporting their products. They can ensure that only qualified crews and proper equipment are used in oil transportation. It should be possible to improve standards for pipeline construction, maintenance and use, and for the carriage of oil in ships, highway and railway vehicles.

It is better to keep oil out of the environment than to try to restore an environment which has been damaged by oil. Prevention is better than cure.

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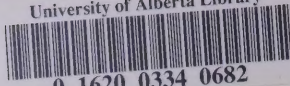
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